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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,523	11/12/2003	Robert Fu	TRAN-P196	8679
<div>7590      01/23/2008 WAGNER, MURABITO &amp; HAO LLP Third Floor Two North Market Street San Jose, CA 95113</div>			<div>EXAMINER MONDT, JOHANNES P</div>	
			<div>ART UNIT 3663</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 01/23/2008</div>	<div>DELIVERY MODE PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/712,523

**Applicant(s)**

FU ET AL.

**Examiner**

JOHANNES P. MONDT

**Art Unit**

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 21-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/30/07 has been entered.

### ***Response to Amendment***

2. Amendment filed 10/30/07 with said Request for Continued Examination forms the basis for this Office Action. In said Amendment, applicants substantially amended claims 1-8 and added new claims 21-28. Claims 1-8 and 21-28 are in the application and are drawn to the invention as elected (cf. Response 3/31/05).

Comments on Remarks submitted with said Amendment are included below under "Response to Arguments".

### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s): There are no reference letters nor reference numerals for the claimed "first switching terminal", nor are there any for the claimed "output terminal". Furthermore, the mapping of critical elements in the invention onto reference characters is also a posteriori in addition to being incomplete. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required

in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date

of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

In particular, the single pole double throw switch appears to have five terminals, but by name has a single pole (see, for instance Jui-Ching Hsu, p. 8 and Fig. 2.3 on page 9), and hence it becomes crucial to identify said single pole. Yet, the Drawings do not show any internal structure of the single pole double throw (SPDT) switch. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. ***Claims 1-8 and 21-28*** are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The internal structure of the single pole double throw switch (SPDT switch) 320, critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Specifically, no internal structure of the single pole double throw switch is shown or otherwise disclosed. Although said single pole double throw switch only has a single pole (see, e.g., Hsu, pages 8-9), five terminals connect to said switch. Therefore internal structure information of element 320 is necessary so as to identify the single pole out of a plurality

of possibilities of poles between different terminals, and so as to show said single pole's uniqueness ('single pole' implying the absence of a plurality of poles). For instance, which pole is connected to Ground, which to 322 (BBN2), and under what circumstances?

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1-8 and 21-28** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Because of the incompleteness of the support in the specification for the disclosure of the single pole double throw switch as explained in section 6 above, the meets and bounds of element 320 are indefinite. Therefore, all claims are indefinite because all claims recite an indefinite component.

#### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1-8 and 21-28** are rejected under 35 U.S.C. 102(b) as being anticipated by Rastegar et al (5,422,591). N.B.: the following rejections are provided subject to the noted indefiniteness on the internal structure of the switch / switch means, assuming that a black box representation as disclosed for said switch / switch means with emanating terminals meet the limitation "switch" and "switch means" (see section 8).

*On claims 1 and 21:* Rastegar et al teach a circuit for regulating the substrate potential of an integrated circuit (see title and abstract; Figure 2) comprising:

a switch 30 or switch means 30 (col. 3, l. 60+);

a first input B (col. 4, l. 2+) capable of controlling said switch coupled to a first N-well bias supply line (through node 20) (the transistors Q1 and Q2 are NMOS transistors, hence source/drain diffusion regions meet "N-well");

a second input A (col. 4, l. 1+) capable of controlling said switch coupled to a substrate bias supply line (through the line emanating from C);

a first switching terminal or first switching terminal means D (col. 4, l. 14-27) of said switch coupled to a ground; and

an output terminal C (col. 4, l. 2-4) of said switch coupled to a P-type substrate ("P-well" of Q1). Said switch is capable, in fact: configured, to selectively couple said second input A to said output terminal C responsive to a voltage of said substrate bias supply line (with node 20) (col. 4, l. 2+).

It is noted furthermore that the claim language that "said switch is operable" constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

*On claims 2 and 22:* said circuit is capable of electrically couple said P-type substrate to said ground (C to D) when a bias voltage is present on said first N-well bias supply line (col. 4, l. 14-27, especially l. 21-22).

It is noted furthermore that the claim language that "said switch is operable" (claim 2) and "said switch means is operable" constitute intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

*On claims 3 and 23:* said circuit is capable of electrically couple said P-type substrate to said substrate bias supply line (B to C) when a substrate bias voltage is present on said substrate bias supply line (col. 4, l. 2+).

It is noted furthermore that the claim language that "said switch is operable" constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.



*On claims 4 and 24:* the circuit further comprises a third input capable of controlling said switch, resp. switch means, coupled to a second N-well bias supply line (source/drain of Q2 meets second 'N-well') (Fig. 2).

It is noted furthermore that the claim language that "for controlling said switch" constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

*On claims 5 and 25:* said switch resp. switch means in the circuit is capable of electrically couple said P-type substrate to said ground (C to D) when a bias voltage is present on said second N-well bias supply line.

It is noted furthermore that the claim language that "operable to electrically couple" constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

*On claims 6 and 26:* said circuit is capable of electrically couple said P-type substrate to said substrate bias supply line (B to C) when a substrate bias voltage is present on said substrate bias supply line (col. 4, l. 2+).

It is noted furthermore that the claim language that "said switch is operable", and "said switch means is operable" (claim 26) constitutes intended use (functional language). Applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

*On claims 7 and 27:* the conditions under which the coupling is achieved are not dependent upon the bias voltage on said N-well bias line, but only on whether the voltage on second input A is high (col. 4, l. 2+) and hence the claim is met by virtue of the rejection of claim 6, which is herewith included by reference.

*On claims 8 and 28:* the conditions under which the coupling is achieved are not dependent upon the bias voltage on said N-well bias line, but only on whether the voltage on second input A is low (col. 4, l. 14-27) and hence the claim is met by virtue of the rejection of claim 5, which is herewith included by reference.

### ***Response to Arguments***

11. Applicant's arguments filed in Remarks on 11/30/07 have been fully considered but they are not persuasive.

12. On Drawings: applicants' arguments (pages 7-8) in traverse of the Drawings Objection are noted. However, with reference to 37 C.F.R. 1.74,

“When there are drawings, there shall be a brief description of the several views of the drawings and the detailed description of the invention shall refer to the different views by specifying the numbers of the figures and to the different parts by use of reference letters or numerals (preferably the latter)”.

There are no reference letters nor reference numerals for the claimed “first switching terminal”, nor are there any for the claimed “output terminal”. Furthermore, the mapping of critical elements in the invention onto reference characters is also a posteriori in addition to being incomplete. Accordingly, for this reason a Drawings Objection is included in this Office Action.

Furthermore, no internal structure of the single pole double throw switch is shown or otherwise disclosed. Although said single pole double throw switch inherently only has a single pole (see, e.g., Hsu, pages 8-9), five terminals connect to said switch. Therefore it is necessary to identify the single pole out of a plurality of possibilities for identifying said single pole.

On 35 USC 112: applicants have overcome the rejection of record by amendment.

On 35 USC 103:

New art has been applied in this Office Action to the substantially amended claims and newly added claims, rendering arguments in traverse moot.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES P. MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Johannes P Mondt/  
Primary Examiner, Art Unit 3663